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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,274	04/01/2004	Ulrich Augustin	06580028US	8108

7590 06/10/2005

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McLean, VA 22102-4215

EXAMINER
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MILLER, CARL STUART

ART UNIT	PAPER NUMBER
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3747

DATE MAILED: 06/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/814,274

Applicant(s)

AUGUSTIN, ULRICH

Examiner

Carl S. Miller

Art Unit

3747

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 11-21 is/are allowed.  
6) ☒ Claim(s) 1-10 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Crofts ('736).

In particular, the applicant's attention is directed to column 8, line 59 - column 9, line 20 wherein the disclosure of Crofts states that voltage variation with the piezo stack occur throughout the cycle, not just when the needle strikes the valve. Further, these voltage differences are shown in Figure 5c wherein it is clear that the voltage limitations of Claim 6 are met. Finally, Figure 1 shows a plate on the end of the valve member which creates the force on the stack, which, in turn, changes the voltage of the stack.

Claims 11-21 are allowed.

Applicant's arguments filed January 12, 2005 have been fully considered but they are not persuasive. In particular, the examiner does not agree with the applicant's argument that the only feedback occurring in Crofts takes place when the needle valve strikes the control valve causing a spike. Instead, as noted in the rejection above, voltage variations in the piezo stack occur throughout the cycle and these are part of the feedback control. The piston of applicant's claims consists of the valve piston itself which is subjected to the fluid pressures in the control chamber (See column 8, line 21-column 9, line 20). Secondly, as also pointed out in the above rejection, the voltages of Claim 6 can be found in Figure 5c. The first peak shown is applicant's first voltage, the

Art Unit: 3751

third peak shown, or any voltage between the first and third peak is applicant's second voltage, the fourth peak shown is applicant's third voltage, the flat area is the fourth voltage and the drop-off or rebound voltage is the fifth voltage. These voltages are shown to be arranged with the first through the fifth voltage being progressively smaller and thus meet the claim limitations of Claim 6.

Finally, claims 13 (and 14) have now been allowed since any rejection of claim 13 would require the modification of both a primary and a secondary reference. Thereby making such a modification non-obvious.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carl Miller whose telephone number is (571) 272-4849. The examiner can normally be reached on MTWTHF.

Application/Control Number: 10/<sup>814,874</sup>~~804,274~~  
Art Unit: 3751

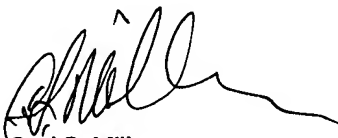
Page 4

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Yuen, can be reached on (571) 272-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Miller/PJ

04/25/05

  
Carl S. Miller  
Primary Examiner